

**ABSTRACTION GENERATION FOR HIERARCHICAL TIMING ANALYSIS  
USING IMPLICITY CONNECTIVITY GRAPH DERIVED FROM DOMAIN  
PROPAGATION**

Tong Xiao

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Robert E. Mains

**ABSTRACT OF THE DISCLOSURE**

A method of using static timing analysis to extract implicit connectivity graph information. The method includes creating a unique clock waveform, defining a clock domain for the clock waveform, injecting the clock domain into a control node, 10 propagating timing events from the control node to a transitively adjacent observation node, and retrieving transitively adjacent control node information to determine path delay information from the control node to the transitively adjacent observation node based upon propagation of timing events.